

ABSTRACT OF THE DISCLOSURE

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5 A compact multi-element cascade circulator in which
electrical and mechanical performance is enhanced while
handling and assembly costs are reduced. The circulator
includes a plurality of junctions connected in cascade to
provide a plurality of non-reciprocal transmission path
between signal ports on a network, and a metal housing
with a cover in which the junctions are disposed. The
plurality of junctions includes an oval permanent magnet,
10 a multi-ferrite component including two (2) oblong
ferrite elements, a dielectric constant medium disposed
between the ferrite elements, and a plurality of
conductor portions sandwiched between the ferrite
elements. By configuring the multi-element cascade
15 circulator to include the oval permanent magnet and the
oblong ferrite component that are employed by more than
one junction of the circulator, the multi-element cascade
circulator achieves enhanced performance with reduced
inventory and manufacturing costs.

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